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(54) Title: OLIGONUCLEOTIDE ANALOGUES, METHODS OF SYNTHESIS AND METHODS OF USE

(57) Abstract: The present invention relates generally to oligonucleotide analogues that include novel protein nucleic acid molecules (PNAs), particularly monomers, dimers, oligomers thereof and methods of making and using these oligonucleotide analogues. The PNAs of the present invention are characterized as including a variety of classes of molecules, such as, for example, hydroxyproline peptide nucleic acids (HypNA) and serine peptide nucleic acids (SerNA). The invention includes monomers, homodimers, heterodimers, homopolymers and heteropolymers of these and other oligonucleotide analogues. The present invention includes method of using these oligonucleotide analogues in the detection and separating of nucleic acid molecules, including uses that include the utilization of oligonucleotide analogues on a solid support. The present invention also includes methods for purifying or separating nucleic acids by hybridization with the oligonucleotides of the present invention, such as mRNA molecules. The present invention also includes the use of oligonucleotides of the present invention in antisense and homologous recombination constructs and methods.

INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER

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US CL :514/2

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B. FIELDS SEARCHED

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Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WEST, CAS Online

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5,977,296 A (NIELSEN et al) 02 November 1999(02.11.99), see entire document.	1-96
A	US 6,015,887 A (TENG) 18 January 2000(18.01.00), see entire document.	1-96

☐ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

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